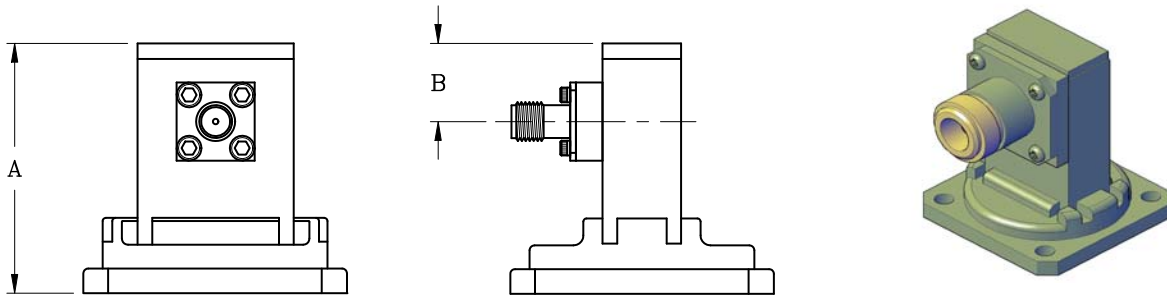


## Rectangular Waveguide To Coax Adapters



Model	WR #	Frequency (GHz)	A	B	Model	WR #	Frequency (GHz)	A	B
WCA28-	28	26.50 - 40.00	0.96	0.34	WCA159-	159	4.90 - 7.05	2.25	0.76
WCA34-	34	22.00 - 33.00	1.00	0.36	WCA187-	187	3.95 - 5.85	2.34	0.88
WCA42-	42	18.00 - 26.50	1.00	0.39	WCA229-	229	3.30 - 4.90	2.53	1.04
WCA51-	51	15.00 - 22.00	1.20	0.43	WCA284-	284	2.60 - 3.95	3.36	1.23
WCA62-	62	12.40 - 18.00	1.85	0.45	WCA340-	340	2.20 - 3.30	3.50	1.50
WCA75-	75	10.00 - 15.00	2.00	0.50	WCA430-	430	1.70 - 2.60	4.00	1.71
WCA90-	90	8.20 - 12.40	2.00	0.54	WCA510-	510	1.45 - 2.20	5.00	2.01
WCA102-	102	7.00 - 11.00	2.00	0.60	WCA650-	650	1.12 - 1.70	6.00	2.49
WCA112-	112	7.05 - 10.00	2.00	0.63	WCA770-	770	0.96 - 1.45	7.50	2.95
WCA137-	137	5.85 - 8.20	2.20	0.66	WCA975-	975	0.75 - 1.12	8.25	3.61

Space Machine offers a standard product line of waveguide to coax adapters covering waveguide sizes WR28 thru WR975. VSWR is 1.20:1 typical. Additional sizes and configurations available upon request. See next page for common connectors used and specs. Please contact us for addition information in regards to coax power handling.

**wr\*** - add HW, RH or TW to the part number if ordering heavy wall waveguide tubing (HW), reduced height waveguide tubing (RH) or thin wall waveguide tubing (TW). See [appendix A](#) for waveguide physical dimensions.

### Ordering Information:

Waveguide To Coax Adapter, WR112,  
Bronze, Cover Flange, SMA Female Connector,  
Chromated, Paint Space Machine Gray.

Example part number:

<u>WCA</u>	<u>wr*</u>	<u>-m</u>	<u>f</u>	<u>cnt</u>	<u>-p</u>	<u>f</u>
WCA	112	-B	01	SF	-C	P

Series (WCA):

Waveguide Size (wr): WR28 thru WR975

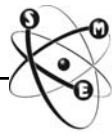
Material (-m): A – Aluminum, B – Bronze, C - OFHC Copper, O – Other

Flange (f): See [Appendix G](#)

Connector (cnt): See [Appendix E](#)

Plating (-p): C – Chromate, S – Silver, G – Gold, O – Other, N – None

Finish (f): P – Paint Space Machine Gray, N – None, O – Other



## *Rectangular Waveguide Common connectors and specs*

WG Size	Frequency (GHZ)	Connector Type	VSWR	Power CW (Watts)	Insertion Loss (dB)
WR28	26.5 - 40.0	K-female	1.2	10	0.35
WR34	22.0 - 33.0	K-female	1.2	10	0.35
WR42	18.0 - 26.5	SMA-female	1.2	50	0.3
WR51	15.0 - 22.0	SMA-female	1.2	50	0.3
WR62	12.4 - 18.0	SMA-female	1.2	50	0.25
WR62	12.4 - 18.0	N-female	1.2	100	0.25
WR75	10.0 - 15.0	SMA-female	1.2	50	0.25
WR75	10.0 - 15.0	N-female	1.2	100	0.25
WR90	8.20 - 12.4	SMA-female	1.2	50	0.22
WR90	8.20 - 12.4	N-female	1.2	100	0.22
WR102	7.00 - 11.0	SMA-female	1.2	50	0.22
WR102	7.00 - 11.0	N-female	1.2	200	0.22
WR112	7.05 - 10.0	SMA-female	1.2	50	0.2
WR112	7.05 - 10.0	N-female	1.2	200	0.2
WR137	5.85 - 8.20	SMA-female	1.2	50	0.2
WR137	5.85 - 8.20	N-female	1.2	200	0.2
WR159	4.90 - 7.05	SMA-female	1.2	50	0.18
WR159	4.90 - 7.05	N-female	1.2	200	0.18
WR187	3.95 - 5.85	SMA-female	1.2	50	0.17
WR187	3.95 - 5.85	N-female	1.2	200	0.17
WR229	3.30 - 4.90	SMA-female	1.2	50	0.16
WR229	3.30 - 4.90	N-female	1.2	200	0.16
WR284	2.60 - 3.95	SMA-female	1.2	50	0.15
WR284	2.60 - 3.95	N-female	1.2	200	0.15
WR340	2.20 - 3.30	SMA-female	1.2	50	0.13
WR340	2.20 - 3.30	N-female	1.2	200	0.13
WR430	1.70 - 2.60	SMA-female	1.2	50	0.13
WR430	1.70 - 2.60	N-female	1.2	200	0.13
WR650	1.12 - 1.70	SMA-female	1.2	50	0.12
WR650	1.12 - 1.70	N-female	1.2	200	0.12
WR975	0.75 - 1.12	N-female	1.2	50	0.1